

WHAT IS CLAIMED IS:

1. A combustion additive comprising iron naphthenate and a hydrocarbonaceous solvent, the additive having a flash point greater than about 55° C.
2. The combustion additive described in claim 1, wherein the iron concentration in the additive is greater than 15 g/L.
3. The combustion additive described in claim 2, wherein the iron concentration in the additive is greater than 22 g/L.
4. The combustion additive described in claim 2, wherein the iron concentration in the additive is approximately 23.6 g/L.
5. The combustion additive described in claim 1, wherein the flash point of the solvent is about 150° F.
6. The combustion additive described in claim 1, wherein the solvent is an aromatic solvent.
7. The combustion additive described in claim 1, wherein the additive is adapted to be added to a diesel fuel.

8. The combustion additive described in claim 1, wherein the solvent has a boiling range of 150-400° C.

9. The combustion additive described in claim 1, wherein the solvent has an average molecular weight of 131-133 g/mol.

10. The combustion additive described in claim 9, further wherein the solvent has a viscosity at 25° C of 1.2 mm²/s.

11. The combustion additive described in claim 9, further wherein the solvent has a density at 15° C of 0.880-0.910 g/ml.

12. The combustion additive described in claim 1, where in the additive has a viscosity at 40° C of no more than 1.70 mm²/s.

13. The combustion additive described in claim 1, wherein the additive has an iron concentration of 22.3 to 25.0 g/L, viscosity at 40° C of no more than 1.70 mm²/s, a boiling range of solvent of 170-300° C, and a cloud point less than -40° C.

14. A method of reducing engine back pressure resulting from particulate loading on an exhaust aftertreatment system, the method comprising the steps of:

providing a combustion engine having an exhaust aftertreatment system,
combusting a fuel in the engine to form combustion exhaust,
adding a combustion additive having an iron-containing compound to
the combustion exhaust wherein the iron-containing compound comprises iron
naphthenate.

15. The method described in claim 14, wherein the iron-containing
compound is added to the combustion exhaust by addition of the iron-
containing compound to the fuel prior to combustion of the fuel in the engine.

16. The method described in claim 14, wherein the iron-containing
compound is added to the exhaust after combustion of the fuel in the engine.

17. The method described in claim 14, wherein the fuel is a diesel fuel.

18. The method described in claim 14, wherein the exhaust
aftertreatment system is a diesel particulate filter.

19. The method described in claim 14, wherein the fuel is a diesel fuel
comprising at least one cold flow improver or antiwaxing additive and further
comprising an ignition improver selected from the group consisting of nitrated
compounds and peroxides, and wherein the combustion additive has an iron

concentration of 0.3 to 125.0 g/L, viscosity at 40° C of no more than 1.70 mm²/s and a cloud point less than -40° C.

20. The method described in claim 14, wherein the fuel is a diesel fuel comprising a cold flow improver or antiwaxing additive, and the combustion additive has an iron concentration of 22.3 to 25.0 g/L, viscosity at 40° C of no more than 1.70 mm²/s, a boiling range of solvent of 170-300° C, and a cloud point less than -40° C.

21. The method described in claim 14, wherein the fuel is a diesel fuel comprising at least one ignition improver selected from the group consisting of nitrated compounds and peroxides, and wherein the combustion additive has an iron concentration of 22.3 to 25.0 g/L, viscosity at 40° C of no more than 1.70 mm²/s, a boiling range of solvent of 170-300° C, and a cloud point less than -40° C.

22. The method described in claim 14, wherein the fuel is a diesel fuel comprising a cold flow improver or antiwaxing additive, and further comprising an ignition improver selected from the group consisting of nitrated compounds and peroxides, and wherein the combustion additive has an iron concentration of 22.3 to 25.0 g/L, viscosity at 40° C of no more than 1.70 mm²/s, a boiling range of solvent of 170-300° C, and a cloud point less than -40° C.

23. A method of enhancing the operation of a diesel particulate filter, the method comprising the steps of:

providing a combustion engine having a diesel particulate filter,
combusting a diesel fuel in the engine to form combustion exhaust,
adding an iron-containing compound to the combustion exhaust,
wherein the iron-containing compound comprises iron naphthenate.

24. The method described in claim 23, wherein the iron-containing compound is added to the combustion exhaust by addition of the iron-containing compound to the fuel prior to combustion of the fuel in the engine.

25. The method described in claim 23, wherein the iron-containing compound is added to the exhaust after combustion of the fuel in the engine.